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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,335	01/23/2002	Kirk D. Pospesel	POU920000180US1	8018

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EXAMINER	
SERRAO, RANODHI N	
ART UNIT	**PAPER NUMBER**
2141	

DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)	
	10/055,335	POSPESEL ET AL.	
	Examiner	Art Unit	
	Ranodhi Serrao	2141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 10 October 2005.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-17 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-17 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10 October 2005 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

3. The applicant argued in substance, "... a second master agent on a closed loop bus in a ring network for simultaneous communications," and "wherein the token is used for complete roundtrip communication transactions so as to avoid deadlock on the closed loop bus" in the independent claims 1, 5, 8, 9, 16, and 17. The new grounds these newly added limitations. See rejections below.

4. The applicant moreover argued that Stallmo et al. teaches a point-to-point system. However, the examiner points to col. 7, lines 45-57, wherein Stallmo et al. states, "...to form a bi-directional ring network, as shown in FIG. 2." Therefore the reference teaches the invention as claimed in combination with Mancusi et al. and Sakai et al. without destroying the intent and purpose of a ring-shaped system.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1-10, 12, and 14-17 rejected under 35 U.S.C. 103(a) as being unpatentable over Mancusi et al. (6,275,864) and Sakai et al. (6,005,869).

7. As per claims 1 and 17, Sakai et al. teaches a method for simultaneous communication over a closed loop bus (see Sakai et al., col. 29, lines 38-49), the method on a first master agent on the closed loop bus having an input and an output to the bus (see Sakai et al., col. 21, lines 44-56), testing if the data from the closed loop bus is a token, wherein the token is used for complete roundtrip communication transactions so as to avoid deadlock on the closed loop bus (see Sakai et al., col. 4, lines 18-45); wherein in response to the data from the closed loop bus being a token, then moving the data from the at least one of the master agent to the closed loop bus and discarding the token from the closed loop bus (see Sakai et al., col. 17, lines 30-38); and in response to the data not being a token from the closed loop bus, then moving the data from the input of the closed loop bus to the output of the closed loop bus (see Sakai et al., col. 13, lines 19-36); wherein in response to the data not being from the at least one of the master agents and the data is from the closed loop bus, then moving the data from the input of the closed loop bus to the output of the closed loop bus (see Sakai et al., col. 13, line 47-col. 14, line 6). But fails to teach the method on the first master agent comprising: coupling at least one slave agent with at least two master agents including a first master agent and a second master agent; determining if

there is data from at least one of the master agents, and if there is data from the at least one of the master agents. However, Mancusi et al. teaches the method on the first master agent comprising: coupling at least one slave agent with at least two master agents including a first master agent and a second master agent (see Mancusi et al., figure 1 and col. 12, line 62-col. 13, line 4); determining if there is data from at least one of the master agents, and if there is data from the at least one of the master agents (see Mancusi et al., col. 30, lines 50-57). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Sakai et al. to the method on the first master agent comprising: coupling at least one slave agent with at least two master agents including a first master agent and a second master agent; determining if there is data from at least one of the master agents, and if there is data from the at least one of the master agents in order to generate all the address and control signals (see Mancusi et al., col. 12, line 62-col. 13, line 4).

8. As per claims 2-4, the motivation to combine Sakai et al. and Mancusi et al. of claim 1 under 35 USC 103(a) (paragraph 6 above) applies fully.

9. As per claim 2, Sakai et al. and Mancusi et al. teach a method further comprising: determining at least one of if there is data from the closed loop bus, and if there is data from the at least one of the master agents (see Sakai et al., col. 17, lines 51-64).

10. As per claim 3, Sakai et al. and Mancusi et al. teach a method further comprising: determining at least one of if there is no data on the output and if an advance line is asserted and in response to the at least one of no data on the output and an advance line is asserted then determining at least one of if there is data from the closed loop bus,

and if there is data from the at least one of the master agents (see Sakai et al., col. 13, line 47-col. 14, line 6: wherein dummy ID information function as an advance line).

11. As per claim 4, Sakai et al. and Mancusi et al. teach a method further comprising: determining if the at least one of the master agents is coupled to an access macro and in response to the at least one of the master agents is coupled to an access macro, placing tokens on the bus, where the maximum number of tokens on the bus is set equal to a total number of master agents plus the total number of slave agents less one (see Sakai et al., col. 20, lines 35-39 and col. 26, lines 12-42: wherein token packet management table serves the function of an access macro).

12. As per claim 5, Sakai et al. teaches a method for simultaneous communication over a closed loop bus, the method on a slave agent having an input and an output to the closed loop bus, the method on the slave comprising: determining if there is data from the closed loop bus or from the at least one slave, in response to being data from the closed loop bus but not from the at least one slave, then moving the data from the closed loop bus to the output, and in response to being data from the at least slave but not the closed loop bus then moving the data from the at least one slave to the output (see Sakai et al., col. 13, line 47-col. 14, line 6); determining if there is data both from the closed loop bus and the at least one slave and in response to being data from both the bus and the at least one slave (see Sakai et al., col. 28, lines 14-32) then performing: if the closed loop bus has priority then moving the data from the closed loop bus to the output and setting the priority to the at least one slave; and if the closed loop bus does not have priority then moving the data from the at least one slave to the output

and setting the priority to the closed loop bus (see Sakai et al., col. 28, lines 33-56) in a ring network for simultaneous communications (see Sakai et al., col. 2, lines 45-52). But fails to teach a method of coupling at least one slave agent with at least two master agent including a first master anent and a second master agent on a closed loop bus. However, Mancusi et al. teaches a method of coupling at least one slave agent with at least two master agent including a first master agent and a second master agent on a closed loop bus (see Mancusi et al., figure 1 and col. 12, line 62-col. 13, line 4). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Sakai et al. to a method of coupling at least one slave agent with at least two master agent including a first master anent and a second master agent on a closed loop bus in a ring network for simultaneous communications in order to generate all the address and control signals (see Mancusi et al., col. 12, line 62-col. 13, line 4).

13. As per claims 6 and 7, the motivation to combine Sakai et al. and Mancusi et al. of claim 5 under 35 USC 103(a) (paragraph 11 above) applies fully.

14. As per claim 6, Sakai et al. and Mancusi et al. teach a method further comprising: determining at least one of if there is data from the closed loop bus and if there is data from the at least one slave (see Sakai et al. col., 17, lines 51-64).

15. As per claim 7, Sakai et al. and Mancusi et al. teach a method further comprising: determining at least one of if there is no data on the output or if an advance line is asserted and in response to the at least one of no data on the output and an advance line is asserted then determining at least one of if there is data from the closed loop bus

a and if there is data from the at least one slave (see Sakai et al., col. 13, line 47-col. 14, line 6: wherein dummy ID information function as an advance line).

16. As per claims 8 and 16, Sakai et al. teaches a method on a master agent having an input and an output to the bus (see Sakai et al., col. 21, lines 44-56), determining after being reset if at least one of the master agents is coupled to an access macro and in response to the at least one of the master agents is coupled to the access macro then placing n-1 tokens on the closed loop bus, where n is the total number of master agents and slave agents communicating on the closed loop bus (see Sakai et al., col. 26, lines 12-42), and wherein the token is used for complete roundtrip communication transactions so as to avoid deadlock on the closed loop bus (see Sakai et al., col. 4, lines 18-45) in a ring network for simultaneous communications in a ring network for simultaneous communications (see Sakai et al., col. 2, lines 45-52); receiving a reset command (see Sakai et al., col. 12, line 65-col. 13, line 7). But fails to teach the method on the master agent comprising: coupling at least one slave agent with at least two master agents including a first master agent and a second master agent on a closed loop bus. However, Mancusi et al. teaches the method on the master agent comprising: coupling at least one slave agent with at least two master agents including a first master agent and a second master agent on a closed loop bus (see Mancusi et al., figure 1 and col. 12, line 62-col. 13, line 4). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Sakai et al. to the method on the master agent comprising: coupling at least one slave agent with at least two master agents including a first master agent and a second master agent on a closed loop bus in order

to generate all the address and control signals (see Mancusi et al., col. 12, line 62-col. 13, line 4).

17. As per claim 9, Sakai et al. teaches a data communications network for simultaneous communications between two or more agents comprising: at least one agent designated as a slave agent coupled to a closed loop communications bus (see Sakai et al., col. 11, line 66-col. 12, line 15); in response to there being data from at least one of the master agents then testing if the data from the closed loop bus is a token (see Sakai et al., col. 13, line 47-col. 14, line 6), wherein the token is used for complete roundtrip communication transactions so as to avoid deadlock on the closed loop bus (see Sakai et al., col. 4, lines 18-45); in response to the data from the closed loop bus is a token, then moving the data from the master to the closed loop bus and discarding the token (see Sakai et al., col. 17, lines 30-38); and in response the data is not a token from the closed loop bus, then moving the data from the input of the closed loop bus to the output of the closed loop bus (see Sakai et al., col. 13, lines 19-36); in response to the data is not from the at least one of the master agents and the data is from the closed loop bus, then moving the data from the input of the closed loop bus to me output of the closed loop bus (see Sakai et al., col. 13, line 47-col. 14, line 6) in a ring network for simultaneous communications (see Sakai et al., col. 2, lines 45-52). But fails to teach a network comprising: at least two agents designated as a first master agent and a second master agent respectively, coupled to the closed loop communications bus; an interface to each of the master agents with an input from the bus and an output to the closed loop bus, the interface comprising a plurality of latches

for testing if there is data. However, Mancusi et al. teaches a network comprising: at least two agents designated as a first master agent and a second master agent respectively, coupled to the closed loop communications bus (see Mancusi et al., figure 1 and col. 12, line 62-col. 13, line 4); an interface to each of the master agents with an input from the bus and an output to the closed loop bus (see Mancusi et al., col. 7, lines 10-23), the interface comprising a plurality of latches for testing if there is data (see Mancusi et al., col. 29, lines 55-67). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Sakai et al. to a network comprising: at least two agents designated as a first master agent and a second master agent respectively, coupled to the closed loop communications bus; an interface to each of the master agents with an input from the bus and an output to the closed loop bus, the interface comprising a plurality of latches for testing if there is data in order to form a local area network using a wiring hub for interconnecting a plurality of network components to the wiring hub including a data signal bus and a programmable switching mechanism connected to the data signal (see Mancusi et al., abstract).

18. As per claims 10, 12, 14, and 15 the motivation to combine Sakai et al. and Mancusi et al. of claim 9 under 35 USC 103(a) (paragraph 16 above) applies fully.

19. As per claim 10, Sakai et al. and Mancusi et al. teach a data communications network further comprising: an interface on each slave agent with an input to the closed loop bus and an output to the closed loop bus (see Sakai et al., col. 24, lines 13-29), the interface comprising a plurality of latches for testing if there is data from the closed loop bus or from the slave agent and if there is data from the bus but not from the slave then

moving the data from the bus to the output and if there is data from the slave but not from the closed loop bus then moving the data from the slave to the output (see Sakai et al., col. 24, lines 13-29: wherein the bus switch portion serves the function of a latch); wherein the plurality of latches tests if there is data both from the closed loop bus and data from the slave and in response to there is data from both the closed loop bus and from the slave then testing if the closed loop bus has priority (see Sakai et al., col. 4, lines –12) and: in response to the closed loop bus having priority then moving the data from the closed loop bus to the output and setting the priority to the slave; and in response to the closed loop bus not having priority then moving the data from the slave to the output and setting the priority to the closed loop bus (see Sakai et al., col. 28, lines 33-56).

20. As per claim 12, Sakai et al. and Mancusi et al. teach a data communications network, wherein at least one of the communication agent is coupled to a first brand of computer and at least one of the communications agents is coupled to a second brand of computer so as to form a heterogeneous environment (see Sakai et al., col. 2, lines 11-26).

21. As per claim 14, Sakai et al. and Mancusi et al. teach a data communications network, wherein the slave agent includes: an interface with an input from the closed loop bus and an output to the closed loop bus, the interface comprising a plurality of latches for testing if the data is for the slave agent and if in response to the data being for the slave agent then transferring the data to the slave (see Sakai et al., col. 24, lines 13-29: wherein the bus switch portion serves the function of a latch).

22. As per claim 15, Sakai et al. and Mancusi et al. teach a data communications network, wherein the interface to each of the master agents further comprises a plurality of latches for testing if the data is for the at least one of the master agents and if the data is for the at least one of the master agents, then passing the data to the at least one of the master agents (see Sakai et al., col. 14, line 58-col. 15, line 13).

23. Claims 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al. and Mancusi et al. as applied to claims 9 and 10 above, and further in view of Stallmo et al. (5,689,678).

24. As per claim 11, Sakai et al. and Mancusi et al. teach the mentioned limitations of claims 9 and 10 above but fail to teach a data communications network, wherein the data further includes control data and parity data. However, Stallmo et al. teaches a data communications network, wherein the data further includes control data and parity data (see Stallmo et al., col. 15, lines 42-53 and col. 16, lines 1-15). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Sakai et al. and Mancusi et al. to a data communications network, wherein the data further includes control data and parity data in order to allow for a significant increase in system performance by providing concurrent input/output operations by a number of data storage devices without changes to the host computer (see Stallmo et al., col. 5, lines 59-67).

25. As per claim 13, Sakai et al. and Mancusi et al. teach the mentioned limitations of claims 9 and 10 above but fail to teach a data communications network, wherein the

closed loop bus is selected from a group of buses consisting of wire, wireless and infrared. However, Stallmo et al. teaches a data communications network, wherein the closed loop bus is selected from a group of buses consisting of wire, wireless and infrared (see Stallmo et al., col. 21, line 63-col. 22, line 15). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Sakai et al. and Mancusi et al. to a data communications network, wherein the closed loop bus is selected from a group of buses consisting of wire, wireless and infrared in order to provide a means by which each MCU may communicate with each other MCU to facilitate the implementation of a memory array architecture, such as a RAID architecture (see Stallmo et al., col. 4, lines 55-64).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ranodhi Serrao whose telephone number is (571) 272-7967. The examiner can normally be reached on 8:00-4:30pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571) 272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RUPAL DHARIA
PRIMARY PATENT EXAMINER